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# MINERAL INDUSTRY SURVEYS

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## COPPER IN APRIL 1997

Daily mine production in April was essentially unchanged from that in March and was up slightly from that in April 1996. Except for small quantities of ore accessed during backfilling of the pit, production from Kennecott's Flambeau Mine ended in April. Production lost from Flambeau will be more than off-set by production from Magma Copper Co.'s Robinson Mine in Nevada, which started in early 1996, and by yearend was operating at near its projected capacity of 70,000 tons per year of copper in concentrate. Primary smelter production in April fell sharply with the planned 6-week shut-down of Kennecott's Utah smelter on April 15 for replacement of the anode casting wheel and rebricking of the flash converting furnace. The smelter reportedly was restarted, as scheduled, on May 27, and was expected to reach full annual capacity of 282,000 tons by yearend (Platt's Metals Week, 1997b). Consumption of refined copper in April rose to the highest level of the year owing to record high monthly consumption at wire rod mills.

Phelps Dodge Corporation announced plans to resume production at its historic copper mine at Ajo, AZ. Modernization is expected to begin in early 1998 and will include \$166 million for a new 38,000-ton-of-ore-per-day concentrator and \$72 million for infrastructure and mining equipment. Production is scheduled to begin as soon as late 1999. At capacity, the mine is expected to generate 61,000 tons per year of copper in concentrate for smelting at the Company's Hidalgo smelter in Playas, New Mexico (Phelps Dodge Corporation, 1997).

Cobre Mining Company Inc., which had been a privately held company until March, was seeking outside investment for expansion of existing facilities and for development of a solvent extraction-electrowinning plant at its existing Continental Mine in southwestern New Mexico. The mine currently consists of two underground mines producing a combined 3,500 tons of ore per day and an open pit producing 9,000 tons of ore per day. According to a company fact sheet, production has increased by 30% in each of the past 3 years, reaching 32,400 tons of copper in concentrate in 1996, and reserves have been expanded 5-fold to approximately 1.8 billion pounds of copper (Cobre Mining Company Inc., 1997). A dispute with a contract miner that threatened to derail development plans was recently settled in court, allowing Cobre to go forward with development plans (Platt's Metals Week, 1997a). Cobre recently purchased its own fleet of mining equipment and was no longer contracting out mining operations.

## References Cited

- Cobre Mining Company Inc., 1997, Investor fact sheet: Cobre Mining Company Inc., April, 2 p.
- Phelps Dodge Corporation, 1997, Phelps Dodge to reopen Ajo Mine: Phelps Dodge Corporation News Release, May 7, 2 p.
- Platt's Metals Week, 1997a, Cobre to develop Continental Copper Mine: Platt's Metals Week, v. 68, no. 16, April 21, p. 9.
- 1997b, Kennecott copper smelter back on line: Platt's Metals Week, v. 68, no. 22, June 2, p. 11.

TABLE 1  
SALIENT STATISTICS OF THE COPPER INDUSTRY IN THE UNITED STATES 1/

(Metric tons, unless noted)

	Source table 2/	1996 p/	1997		January- April
			March	April	
Production:					
Primary:					
Mine, recoverable	(2)	1,910,000	161,000 r/	158,000	624,000
Smelter 3/	(3)	1,300,000	126,000	108,000	462,000
Refinery:					
Electrolytic:					
Domestic	(4)	1,290,000	112,000 r/	110,000	445,000
Foreign	(4)	146,000	7,570	12,000	36,800
Electrowon	(4)	574,000	47,100	45,700	184,000
Total	(4)	2,010,000	166,000 r/	168,000	666,000
Secondary recoverable copper:					
Refineries	(5)	327,000	36,400	31,900	134,000
Ingot makers 4/	(5)	124,000	10,300	10,300	41,300
Brass and wire-rod mills	(5)	717,000	66,400 r/	68,800	261,000
Foundries, etc.	(5)	62,400	5,200	5,200	20,800
Consumption:					
Total apparent	(8)	2,820,000	235,000	NA	NA
Refined (reported)	(7)	2,630,000	234,000	243,000	941,000
Purchased copper-base scrap	(9)	1,640,000	151,000	151,000	590,000
Stocks at end of period:					
Total refined	(11)	147,000	161,000	161,000	XX
Blister, etc.	(11)	173,000	142,000 r/	131,000	XX
Prices:					
U.S. producer cathode (cents per pound)	(12)	109.044	118.141	113.034	114.172
Imports:					
Ores and concentrates 5/	(14)	72,400	10,000	NA	NA
Refined	(14)	543,000	43,600	NA	NA
Exports:					
Ores and concentrates 5/	(15)	195,000	16,600	NA	NA
Refined	(15)	170,000	6,460	NA	NA

p/ Preliminary. r/ Revised. NA Not available. XX Not applicable.

1/ Data are rounded to three significant digits, except prices; may not add to totals shown.

2/ Numbers in parentheses refer to the detailed tables where these data are located.

3/ From domestic and foreign ores.

4/ 1996 and 1997 monthly data estimated based on 1995 monthly average.

5/ Copper content.

TABLE 2  
MINE PRODUCTION OF RECOVERABLE COPPER  
IN THE UNITED STATES 1/

(Metric tons)

Period	State		Total
	Arizona	Others 2/	
1996: p/			
April	103,000	53,900	157,000
May	107,000	53,700	161,000
June	106,000	56,100	163,000
July	104,000	57,400	161,000
August	106,000	58,900	165,000
September	99,900	58,200	158,000
October	105,000	59,300	164,000
November	102,000	55,000	157,000
December	104,000	60,800	165,000
Jan. - Apr.	409,000	208,000	617,000
Year total	1,240,000	667,000	1,910,000
1997:			
January	98,200 r/	59,400 r/	158,000
February r/	92,800	54,100	147,000
March r/	107,000	54,400	161,000
April	102,000	56,000	158,000
Jan. - Apr.	401,000	224,000	624,000

p/ Preliminary. r/ Revised.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Includes production from Idaho, Illinois, Missouri, Montana, Nevada, New Mexico, Utah, and Wisconsin.

TABLE 3  
COPPER 1/ PRODUCED AT SMELTERS IN THE UNITED STATES, BY SOURCE 2/

(Metric tons, copper content)

Period	Domestic and foreign ores	Scrap	Total
1996: p/			
April	105,000	28,200	133,000
May	97,600	27,400	125,000
June	105,000	29,300	134,000
July	106,000	29,500	136,000
August	99,600	28,100	128,000
September	114,000	26,800	140,000
October	118,000	27,500	146,000
November	112,000	25,100	137,000
December	116,000	30,800	146,000
Jan. - Apr.	433,000	115,000	548,000
Year total	1,300,000	339,000	1,640,000
1997:			
January	118,000	28,200	146,000
February	110,000	25,800	136,000
March	126,000	28,700	155,000
April	108,000	22,800	131,000
Jan. - Apr.	462,000	105,000	568,000

p/ Preliminary.

1/ Includes blister, anode and black copper from primary or secondary sources.

2/ Data are rounded to three significant digits; may not add to totals shown.

TABLE 4  
PRODUCTION OF REFINED COPPER, BY SOURCE AND METHOD OF RECOVERY 1/

(Metric tons)

Period	Primary materials				Scrap			Total refined
	Electrolytically refined 2/		Electrowon	Total	Electrolytically refined 2/	Fire refined	Total	
	Domestic 3/	Foreign						
1996: p/								
April	110,000	14,800	47,400	173,000	14,200	10,400	24,700	197,000
May	107,000	13,900	50,700	172,000	16,900	12,700	29,600	201,000
June	94,600	9,430	48,300	152,000	17,300	13,700	30,900	183,000
July	113,000	10,600	48,200	172,000	18,100	6,310	24,400	196,000
August	102,000	12,000	47,100	161,000	14,000	11,000	25,000	186,000
September	105,000	12,700	45,900	163,000	12,900	13,900	26,800	190,000
October	122,000	9,190	51,600	183,000	17,200	13,500	30,600	213,000
November	105,000	10,100	47,800	163,000	15,000	10,900	25,900	189,000
December	113,000	8,240	49,700	171,000	18,500	7,800	26,300	198,000
Jan. - Apr.	433,000	59,800	184,000	677,000	56,400	50,600	107,000	784,000
Year total	1,290,000	146,000	574,000	2,010,000	186,000	140,000	327,000	2,340,000
1997:								
January	114,000	8,240	47,800	170,000	24,500	11,500	35,900	206,000
February	109,000	9,050	43,700	162,000	18,000	12,000	30,000	192,000
March	112,000 r/	7,570	47,100	166,000 r/	21,800	14,600	36,400	203,000 r/
April	110,000	12,000	45,700	168,000	21,100	10,800	31,900	200,000
Jan. - Apr.	445,000	36,800	184,000	666,000	85,300	48,900	134,000	800,000

p/ Preliminary. r/ Revised.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Based on source of material at smelter level.

3/ Includes fire-refined copper.

TABLE 5  
COPPER RECOVERABLE IN UNALLOYED AND ALLOYED FORM FROM PURCHASED COPPER-BASED SCRAP 1/

(Metric tons, copper content)

Period	Refineries 2/		Ingot makers 3/		Brass and wire-rod mills		Foundries, etc. 4/		Total 5/
	New scrap	Old scrap	New scrap	Old scrap	New scrap	Old scrap	New scrap	Old scrap	
1996: p/									
April	8,200	16,500	2,890	7,440	57,400	4,240	2,240	2,960	102,000
May	10,000	19,600	2,890	7,440	60,100	4,230	2,240	2,960	109,000
June	10,900	20,000	2,890	7,440	58,700	4,960	2,240	2,960	110,000
July	6,010	18,400	2,890	7,440	50,100	3,880	2,240	2,960	93,900
August	8,310	16,700	2,890	7,440	55,600	3,870	2,240	2,960	100,000
September	10,300	16,500	2,890	7,440	55,000	3,850	2,240	2,960	101,000
October	10,900	19,800	2,890	7,440	56,300	3,640	2,240	2,960	106,000
November	8,730	17,200	2,890	7,440	53,400	4,580	2,240	2,960	99,400
December	5,750	20,600	2,890	7,440	52,300	4,410	2,240	2,960	98,500
Jan. - Apr.	40,100	66,900	11,600	29,700	228,000	13,200	8,950	11,900	411,000
Year total	111,000	216,000	34,700	89,200	670,000	46,700	26,900	35,600	1,230,000
1997:									
January	10,800	25,200	2,890	7,440	61,500	3,340	2,240	2,960	116,000
February	10,600	19,400	2,890	7,440	60,100	1,170	2,240	2,960	107,000
March	13,300	23,100	2,890	7,440	64,000 r/	2,370	2,240	2,960	118,000
April	10,200	21,700	2,890	7,440	65,900	2,880	2,240	2,960	116,000
Jan. - Apr.	44,900	89,300	11,600	29,700	252,000	9,760	8,950	11,900	458,000

p/ Preliminary. r/ Revised.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Electrolytically refined and fire-refined scrap based on source of material at smelter level.

3/ Data no longer collected monthly; 1995 and 1996 data estimated based on 1995 annual data.

4/ Estimate based on 1995 annual data.

5/ Does not include an estimate, based on reported 1995 data, of 3,100 tons per month from new scrap and 2,330 tons per month from old scrap of copper recovered from scrap other than copper-base.

TABLE 6  
PRODUCTION, SHIPMENTS, AND STOCKS OF BRASS AND WIRE-ROD MILL SEMIFABRICATES 1/

(Metric tons, gross weight)

Period	Production		Shipments		Stocks, end of period	
	Brass mills	Wire rod mills	Brass mills	Wire rod mills	Brass mills	Wire rod mills
1996: p/						
April	131,000	157,000	133,000	175,000	49,400	55,800
May	130,000	173,000	129,000	165,000	51,000	63,200
June	131,000	163,000	126,000	151,000	55,200	75,200
July	111,000	139,000	114,000	152,000	52,200	62,900
August	130,000	142,000	132,000	156,000	50,300	48,500
September	135,000	163,000	136,000	158,000	49,300	53,200
October	139,000	180,000	139,000	184,000	49,400	50,100
November	135,000	176,000	134,000	171,000	50,700	55,000
December	114,000	155,000	113,000	143,000	52,000	66,500
Jan. - Apr.	523,000	625,000	526,000	638,000	XX	XX
Year total	1,550,000	1,920,000	1,550,000	1,920,000	XX	XX
1997:						
January	134,000	178,000	135,000	183,000	51,100	61,300
February	132,000	169,000	132,000	163,000	51,500	67,200
March	143,000	173,000	143,000 r/	171,000	51,900 r/	69,200
April	137,000	186,000	134,000	184,000	54,300	71,800
Jan. - Apr.	546,000	706,000	543,000	701,000	XX	XX

p/ Preliminary. r/ Revised. XX Not applicable.

1/ Data are rounded to three significant digits; may not add to totals shown.

TABLE 7  
CONSUMPTION OF REFINED COPPER 1/

(Metric tons)

Period and item	Wire rod mills	Brass mills 2/	Other plants 3/	Total
1996: p/				
April	162,000	47,500	4,630	214,000
May	184,000	47,500	4,630	236,000
June	164,000	49,400	4,630	218,000
July	147,000	41,900	4,630	193,000
August	154,000	50,100	4,630	209,000
September	162,000	55,600	4,630	222,000
October	185,000	54,100	4,630	244,000
November	177,000	47,300	4,630	229,000
December	150,000	45,700	4,630	200,000
Jan. - Apr.	662,000	196,000	18,500	876,000
Year total	1,980,000	588,000	55,600	2,630,000
1997:				
January	179,000	55,000	4,630	239,000
February	172,000	48,600	4,630	225,000
March	174,000	55,500	4,630	234,000
April:				
Cathodes	188,000	33,900	1,120	223,000
Wire bars	--	W	W	W
Ingot and ingot bars	--	1,870	1,660	3,520
Cakes and slabs	--	5,880	W	5,880
Billets and other	--	9,280	1,860	11,100
Total	188,000	51,000	4,630	243,000
Jan. - Apr.	713,000	210,000	18,500	941,000

p/ Preliminary. W Withheld to avoid disclosing company proprietary data; included in "Billets and other."

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ In 1995, brass mills consumed 2,210 tons of refined lead, 706 tons of pig tin, 3,870 tons of refined nickel, and 64,100 tons of slab zinc.

3/ Monthly consumption by ingot makers, chemical plants, foundries, and miscellaneous manufacturers; estimated based on 1995 annual data.

TABLE 8  
U.S. APPARENT CONSUMPTION OF COPPER 1/

(Metric tons)

Period	Refined copper production	Copper in old scrap 2/	Net refined imports	Stock change during period	Apparent consumption
1996: p/					
April	173,000	33,400	31,000 r/	10,800	226,000
May	172,000	36,500	40,400 r/	(26,400)	222,000
June	152,000	37,700	27,100 r/	(7,400)	210,000
July	172,000	35,000	30,600 r/	23,300	214,000
August	161,000	33,300	40,500 r/	(6,660)	228,000
September	163,000	33,100	41,300 r/	(13,100)	225,000
October	183,000	36,100	22,800 r/	(4,510)	237,000
November	163,000	34,500	42,800 r/	(14,100)	226,000
December	171,000	37,700	26,600 r/	21,500	214,000
Jan. - Mar.	505,000	97,600	70,500 r/	57	616,000
Year total	2,010,000	415,000	374,000 r/	(16,500)	2,620,000
1997:					
January	170,000	41,300	44,300	4,510	251,000
February	162,000	33,300	38,200	2,440	231,000
March	166,000 r/	38,200	37,100	7,060 r/	235,000
April	168,000	37,300	NA	NA	NA
Jan. - Mar.	498,000	113,000	120,000	14,000	716,000

p/ Preliminary. r/ Revised. NA Not available.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Includes reported monthly production of copper from old scrap of copper-base and of non-copper-base materials and estimates for annual reporters based on 1995 data.

TABLE 9  
CONSUMPTION OF PURCHASED COPPER-BASE SCRAP 1/

(Metric tons, gross weight)

Period	Smelters and refineries		Ingot makers 2/		Brass and wire-rod mills 3/		Foundries, etc. e/		Total scrap used
	New scrap 2/	Old scrap	New scrap	Old scrap	New scrap	Old scrap	New scrap	Old scrap	
1996: p/									
April	9,680	26,800	3,870	11,300	71,900	5,000	2,570	3,390	134,000
May	10,800	31,400	3,870	11,300	75,500	5,100	2,570	3,390	144,000
June	13,200	36,300	3,870	11,300	73,200	5,990	2,570	3,390	150,000
July	8,120	27,700 r/	3,870	11,300	63,800	4,790	2,570	3,390	126,000
August	10,000	28,100 r/	3,870	11,300	70,700	4,880	2,570	3,390	135,000
September	12,700	27,100 r/	3,870	11,300	69,100	5,010	2,570	3,390	135,000
October	11,600	33,700 r/	3,870	11,300	71,600	4,510	2,570	3,390	143,000 r/
November	10,700	29,200 r/	3,870	11,300	67,900	5,530	2,570	3,390	134,000
December	7,700	31,800 r/	3,870	11,300	66,100	5,400	2,570	3,390	132,000
Jan. - Apr.	44,600	114,000	15,500	45,300	287,000	16,500	10,300	13,500	546,000
Year total	130,000	359,000	46,400	136,000	845,000	57,700	30,800	40,600	1,640,000
1997:									
January	10,900	30,700	3,870	11,300	77,800	3,420	2,570	3,390	144,000
February	10,700	34,700	3,870	11,300	76,300	1,240	2,570	3,390	144,000
March	12,500	33,100	3,870	11,300	81,700 r/	2,470	2,570	3,390	151,000
April	11,000	33,200	3,870	11,300	83,200	2,970	2,570	3,390	151,000
Jan. - Apr.	45,000	132,000	15,500	45,300	319,000	10,100	10,300	13,500	590,000

e/ Estimated. p/ Preliminary. r/ Revised.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Data for 1996 and 1997 are estimated from 1995 annual data.

3/ Consumption at brass and wire-rod mills assumed equal to receipts.

TABLE 10  
CONSUMPTION OF PURCHASED COPPER-BASE SCRAP 1/ 2/

(Metric tons, gross weight)

Scrap type and processor	1996 p/		1997			
	Jan. - Apr.	Year total	February	March	April	Jan. - Apr.
No. 1 wire and heavy:						
Smelters and refiners	51,500	147,000	12,800	15,300	12,200	52,300
Brass and wire-rod mills	122,000	355,000	29,400	32,200 r/	35,000	130,000
No. 2 mixed heavy and light:						
Smelters and refiners	66,300	215,000	23,300	20,300	18,700	80,600
Brass and wire-rod mills	11,500	34,600	3,340	2,730	3,170	12,300
Total unalloyed scrap:						
Smelters and refiners	118,000	362,000	36,100	35,600	30,900	133,000
Brass mills	133,000	390,000	32,700	34,900 r/	38,200	142,000
Red brass: 3/						
All plants	21,900	66,200	5,440	5,740	5,580	22,400
Leaded yellow brass:						
All plants	129,000	397,000	35,900	38,200	37,200	147,000
Yellow and low brass:						
Smelters and refiners	(4/)	(4/)	(4/)	(4/)	(4/)	(4/)
Brass mills	17,800	52,000	3,330	3,760	4,020	14,300
Cartridge cases and brass:						
Smelters and refiners	--	--	--	--	--	--
Brass mills	16,300	45,700	4,490	5,260	5,130	19,200
Auto radiators:						
Smelters and refiners	24,300	73,000	6,080	6,080	6,080	24,300
Bronzes:						
Smelters and refiners	--	--	--	--	--	--
Brass mills	3,970	11,200	1,100	1,070	1,440	4,660
Nickel-copper alloys:						
Smelters and refiners	--	--	--	--	--	--
Brass mills	7,830	20,500	1,260	1,950	1,280	6,110
Low grade & residues:						
Smelters and refiners	29,000	88,800	5,820	7,300	9,840	30,500
Other alloy scrap: 5/						
Smelters and refiners	13,100	41,400	3,790	3,790	4,380	15,900
Brass mills	1,570	4,440	392	366	453	1,540
Total alloyed scrap:						
Smelters and refiners	102,000	309,000	24,500	26,000	29,100	106,000
Brass mills	170,000	512,000	44,800	49,300	48,000	187,000
Total scrap:						
Smelters and refiners	219,000	671,000	60,600	61,500	60,000	239,000
Brass and wire-rod mills	303,000	902,000	77,500	84,200 r/	86,100	329,000

p/ Preliminary. r/ Revised.

1/ Does not include: consumption by foundries, chemical plants and miscellaneous manufacturers, estimated to total about 6,000 tons of scrap per month in 1995; consumption of home scrap at brass mills which averaged 57,200 tons per month in 1995. Monthly data include estimates of about 30,000 tons of scrap per month consumed by ingot makers and several smelters that report only on an annual basis.

2/ Data are rounded to three significant digits; may not add to totals shown.

3/ Includes composition turnings, silicon bronze, zincy bronze, railroad car boxes, cocks and faucets, gilding metal and commercial bronze.

4/ Withheld to avoid disclosing company proprietary data; included in "Other alloy scrap."

5/ Includes refinery brass, beryllium copper, phosphor copper and aluminum bronze.

TABLE 11  
COPPER STOCKS AT END OF PERIOD 1/

(Metric tons)

Period	Crude copper 2/	Refined copper					Total refined
		Refineries 3/	Wire rod mills 3/	Brass mills 3/	Other 4/	Comex 5/	
1996: p/							
April	171,000	35,600	25,500	11,300	3,540	18,800	174,000
May	166,000	35,500	19,200	9,840	3,540	12,000	148,000
June	162,000	33,500	13,100	12,700	3,540	6,880	140,000
July	154,000	41,700	29,700	13,700	3,540	16,100	164,000
August	161,000	34,000	25,800	13,800	3,540	20,100	157,000
September	161,000	32,400	19,400	12,800	3,540	19,700	144,000
October	163,000	33,900	31,000	13,200	3,540	28,600	139,000
November	167,000	32,200	30,600	11,900	3,540	26,000	125,000
December	173,000	32,200	32,100	14,000	3,540	26,600	147,000
1997:							
January	168,000	30,200	28,000	13,100	3,540	16,700	151,000
February	172,000	33,000	22,300	13,000	3,540	22,500	154,000
March	142,000 r/	35,500	23,600	10,900 r/	3,540	38,600	161,000
April	131,000	34,200	23,300	11,500	3,540	44,300	161,000

p/ Preliminary. r/ Revised.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Copper content of blister and other materials in transit and in process of refining.

3/ Stocks of refined copper as reported; no estimates are made for non-respondents.

4/ Monthly estimates based on reported and 1995 annual data, comprising stocks at secondary smelters, chemical plants, foundries, and miscellaneous manufacturers.

5/ Commodity Exchange Inc., New York.

6/ London Metal Exchange Ltd., U.S. warehouses.

TABLE 12  
AVERAGE PRICE OF COPPER IN THE UNITED STATES AND  
ON THE LONDON METAL EXCHANGE

(Cents per pound)

Period	U.S. producers delivered price		Comex first position 3/	LME cash price Grade A
	Cathode 1/	Wirebar 2/		
1996:				
April	122.628	131.286	119.286	117.707
May	126.667	135.327	123.327	120.527
June	107.828	116.538	104.488	98.447
July	94.007	102.693	90.667	90.006
August	95.479	104.139	92.139	91.072
September	93.848	102.623	90.508	88.026
October	96.873	105.533	93.533	88.935
November	104.097	112.776	100.776	101.149
December	104.114	114.781	102.781	102.837
Average	109.044	117.888	105.872	104.045
1997:				
January	111.949	120.054	108.291	110.417
February	113.564	122.224	110.224	109.081
March	118.141	126.803	114.803	109.803
April	113.034	110.444	109.696	108.420
Average	114.172	119.881	110.754	109.430

1/ Listed as "U.S. producer cathode."

2/ Listed as "Electrolytic wirebar (Warrenton Refining Co.)."

3/ Listed as "Comex high grade first position."

Sources: Platt's Metals Week and American Metal Market.



TABLE 13  
NEW YORK AVERAGE BUYING PRICES FOR COPPER SCRAP

(Cents per pound)

Month	Brass mills No. 1 scrap	Refiners No. 2 scrap	Dealers (New York)	
			No. 2 scrap	Red brass turnings and borings
1996:				
April	114.20	96.99	84.43	58.00
May	116.25	97.10	84.59	57.84
June	96.95	83.00	77.85	55.35
July	88.58	69.76	64.43	46.79
August	90.85	73.93	64.00	46.09
September	88.69	72.56	64.00	46.00
October	89.21	73.04	64.00	46.00
November	97.04	79.22	64.63	46.63
December	99.17	81.94	65.00	47.00
Average	101.53	84.42	75.27	51.85
1997:				
January	99.29	81.49	66.13	47.57
February	106.74	87.80	67.42	48.21
March	109.74	91.18	71.80	53.60
April	96.60	80.83	65.77	53.05
Average	103.09	85.32	67.78	50.61

Source: American Metal Market.

TABLE 14  
U.S. IMPORTS FOR CONSUMPTION OF COPPER (UNMANUFACTURED), BY CLASS 1/

(Metric tons, copper content)

Country or territory	Ore and concentrate			Matte, ash and precipitates			Blister and anodes			Refined		
	1997			1997			1997			1997		
	1996	Mar.	Jan.-Mar.	1996	Mar.	Jan.-Mar.	1996	Mar.	Jan.-Mar.	1996	Mar.	Jan.-Mar.
Brazil	--	--	--	--	--	--	--	--	--	15,600	--	301
Canada	9,000	--	--	236	29	60	80,200	8,140	20,900	278,000	25,500	75,000
Chile	59,800	10,000	14,700	--	--	--	51,700	5,430	11,300	119,000	11,000	35,000
Germany	--	--	--	--	--	--	--	--	--	9,960	(2/)	1
Kazakhstan	--	--	--	--	--	--	--	--	--	2,630	1,470	3,020
Malaysia	--	--	--	79	--	--	--	--	--	--	--	--
Mexico	3,680	--	--	2,050	79	224	19,600	1,150	2,140	30,300	1,040	4,360
Peru	--	--	--	--	--	--	9,550	--	1,500	64,700	4,210	27,600
Russia	--	--	--	--	--	--	--	--	--	15,000	--	4
Spain	--	--	--	--	--	--	2,710	111	665	--	--	--
Taiwan	--	--	--	24	3	15	--	--	(2/)	(2/)	--	(2/)
Other	3	--	13	2 r/	--	--	649	--	--	8,360 r/	360	2,250
Total	72,400	10,000	14,700	2,390	112	299	164,000	14,800	36,400	543,000	43,600	147,000

r/ Revised.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Less than 1/2 unit.

Source: Bureau of the Census.

TABLE 15  
U.S. EXPORTS OF COPPER (UNMANUFACTURED), BY CLASS 1/

(Metric tons, copper content)

Country or territory	Ore and concentrate			Matte, ash and precipitates			Blister and anodes			Refined		
	1996	1997		1996	1997		1996	1997		1996	1997	
		Mar.	Jan.-Mar.		Mar.	Jan.-Mar.		Mar.	Jan.-Mar.		Mar.	Jan.-Mar.
Belgium	--	--	--	3	108	180	239	--	52	46	10	10
Brazil	2,810	--	--	5	--	--	--	(2/)	(2/)	25	--	--
Canada	79,900	4,330	14,600	31,500	4,080	7,970	18,000	1,620	4,050	28,700	1,380	6,160
Chile	--	--	--	--	--	--	2	13	13	51	242	248
China	54,500	--	9,150	2	--	--	44	--	997	233	--	--
Germany	76	6,090	6,090	1	--	--	463	20	68	189	4	13
Ghana	--	--	--	9	--	--	47	68	68	25	--	--
Hong Kong	16	--	--	29	--	17	1,170	393	1,480	525	9	57
Indonesia	--	--	--	--	--	--	39	42	86	--	--	--
Italy	8	--	--	2	--	--	451	39	214	2,150	--	--
Japan	47,600	3,090	4,640	2,130	43	61	456	106	289	31,900	1,220	5,310
Korea, Republic of	1,570	3,060	3,060	19	--	--	1,100	100	378	3,480	400	1,630
Malaysia	--	--	--	--	--	--	(2/)	--	--	6,470	--	--
Mexico	2,340	--	--	2,790	2,310	5,080	410	68	112	11,800	226	627
Netherlands	--	--	--	3	--	7	--	--	--	33	390	396
Singapore	--	--	--	8	2	2	44	175	291	2,690	--	636
Spain	2,800	--	--	6	--	--	15	--	15	7	2	2
Taiwan	--	--	--	--	19	19	330	89	591	54,100	1,700	8,940
Thailand	--	--	--	--	--	--	112	--	22	26,400	701	2,690
Trinidad and Tobago	59	--	--	--	18	55	--	39	58	18	--	--
United Kingdom	123	--	1	--	2	21	4	--	44	50	97	152
Other	3,370 r/	--	1	555 r/	9	69	316 r/	49	109	871 r/	73	437
Total	195,000	16,600	37,500	37,100	6,590	13,500	23,200	2,820	8,940	170,000	6,460	27,300

r/ Revised.

1/ Data are rounded to three significant digits; may not add to totals shown.

Source: Bureau of the Census.

TABLE 16  
U.S. COPPER SCRAP TRADE 1/

(Metric tons, gross weight)

Country or territory	Imports						Exports					
	Unalloyed			Alloyed			Unalloyed			Alloyed		
	1996	1997		1996	1997		1996	1997		1996	1997	
		Mar.	Jan.-Mar.		Mar.	Jan.-Mar.		Mar.	Jan.-Mar.		Mar.	Jan.-Mar.
Belgium	--	--	--	33	4	4	9,380	1,180	1,380	1,440	18	264
Canada	40,500	4,720	13,900	57,700	4,740	14,000	104,000	10,100	28,600	41,900	3,390	10,100
Chile	11,800	--	1,210	178	20	37	--	--	--	5	--	--
China	--	--	--	79	--	--	12,600	1,520	2,950	24,900	2,480	6,460
Colombia	668	330	514	3,020	139	304	--	--	--	3	--	--
Costa Rica	1,320	102	326	386	16	104	--	--	--	--	--	--
Dominican Republic	603	92	289	1,940	92	325	--	--	--	--	--	--
Germany	4	--	1	122	59	59	7,190	4,150	7,730	5,290	255	620
Hong Kong	--	--	--	120	--	--	28,600	3,490	7,810	43,200	3,600	7,450
India	--	--	--	--	--	--	3,960	201	466	29,800	2,460	6,480
Jamaica	710	124	205	592	77	131	--	--	--	--	--	--
Japan	2	(2/)	(2/)	83	16	36	19,300	1,680	4,720	18,700	970	3,610
Korea, Republic of	--	--	--	18	--	--	5,140	190	1,140	11,200	1,250	3,800
Mexico	27,900	2,250	5,740	42,400	3,740	9,840	2,470	--	135	4,030	561	1,100
Netherlands	--	--	--	30	--	--	65	--	--	277	199	199
Panama	1,020	76	335	1,100	135	226	--	--	--	--	--	--
Peru	785	51	80	784	132	271	--	40	40	647	--	--
Switzerland	--	--	--	--	--	17	2,760	--	--	18	--	--
Taiwan	102	--	3	1,480	347	830	1,340	7	99	4,970	445	880
Thailand	--	--	--	36	--	--	37	--	19	2,460	134	590
United Kingdom	(2/)	--	--	1,310	316	519	194	20	20	381	49	142
Venezuela	2,600	274	700	2,540	136	683	--	--	--	40	--	--
Vietnam	--	--	--	--	--	--	26	11	14	402	36	111
Other	2,340 r/	153	518	7,880 r/	735	2,310	582 r/	22	82	5,650 r/	199	925
Total	90,300	8,180	23,800	122,000	10,700	29,700	197,000	22,600	55,200	195,000	16,100	42,700

r/ Revised.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Less than 1/2 unit.

Source: Bureau of the Census.

TABLE 17  
U.S. COPPER SULFATE TRADE 1/

(Gross weight, metric tons)

Country or territory	Imports					Exports				
	1996	1997				1996	1997			
		January	February	March	Total		January	February	March	Total
Australia	--	--	--	--	--	5	--	--	53	53
Belgium	--	--	--	--	--	72	--	--	--	--
Canada	4,240	355	192	300	847	2,050	112	182	134	428
Chile	391	57	99	--	156	--	--	--	--	--
China	878	20	120	420	560	--	--	--	--	--
Costa Rica	--	--	--	--	--	32	--	--	--	--
Honduras	--	--	--	--	--	26	--	--	--	--
Israel	1,200	82	82	143	306	--	--	--	--	--
Japan	--	--	--	--	--	--	--	--	50	50
Mexico	9,550	1,040	1,040	905	2,980	5	5	--	--	5
Peru	1,010	150	136	208	494	--	--	--	--	--
Philippines	--	--	--	--	--	12	--	8	--	8
Russia	--	--	--	--	--	15	--	--	39	39
Taiwan	13	--	29	34	63	69	8	--	--	8
Other	139 r/	5	4	2	10	35 r/	--	5	10	19
Total	17,400	1,710	1,700	2,010	5,420	2,320	129	195	288	611

r/ Revised.

1/ Data are rounded to three significant digits; may not add to totals shown.

Source: Bureau of the Census.